

Logistics improvement in the healthcare system

Introduction to the topic

Hungary has a tax-funded universal healthcare system, organized by the state-owned National Health Insurance Fund (Nemzeti Egészségbiztosítási Alapkezelő (NEAK)). Healthcare in Hungary has experienced a positive change in recent years with more investments in the healthcare sector, however additional reforms can be made.

Logistics means how the patients are able to access medical care in the national healthcare system, what kind of journey they make and what kind of medical equipment are available for their treatment. In case the patients are well-prepared for the doctor's appointment and have a short waiting list than usual, they will more likely pay attention to prevention and control their current health status while having a better customer experience.

Challenge description

In 2016, the Euro Health Consumer Index ranked the Hungarian healthcare system 30th out of 35 countries in the EU. Though Hungary does excel in infant vaccination and physical education, it has some of the EU's highest waiting times for CT scans and a higher-than-average occurrence of lung disease, infections and cancer deaths. In 2016, Hungary had the third-highest preventable mortality rate and fifth-highest mortality rate from treatable causes in the EU, indicating substantial room for improvement [1], which show an increased need for logistic innovation.

According to the Organization for Economic Cooperation and Development, Hungary has the lowest numbers of necessary medical supplies. The distribution of resources is concentrated largely in the capital of Budapest. High levels of mortality from preventable and treatable causes suggest that the effectiveness of the health system could be greatly improved [2]. More focus on prevention, primary care, and improved patient logistics could contribute to reducing avoidable deaths. Some questions might worth consider during the challenge solving (not necessarily all of them):

- How would you improve the patient's customer experience while making the waiting lists for CT scans and other interventions as transparent as possible?
- How is it possible to look through the patient journey in the healthcare system from the physician's point of view? How would the patient logistics be effective?

- How would you predict the medical equipment needs in the hospitals nationwide in order to make the logistics procedures and the necessary healthcare spending as smooth as possible?

Feel free to dream big!

Who we are

This challenge is provided by the organizer team itself, from CraftHub. We are a multifaceted IT event management company with a diverse portfolio of conferences, hackathons, developer competitions and workshops both online and offline. A hub that makes knowledge available and helps tech crafters continuously improve their skills.

What we will provide

During the hackathon you can ask help from our mentors or even from the CraftHub team to get a closer insight of the organization or the processes of a hackathon. They will be at the venue the whole time, so use the opportunity to talk to them and ask for feedback on your project!

Implementation and technology

You are free to use any suitable technology to solve this task. It can be a website, a plugin, an app or maybe even a digital assistant. We do not expect a full, working solution, but rather something that helps the judges understand your idea and showcase your skills. There are no technical limitations, feel free to choose any development environment or design/wireframing tool for your prototype.

Judging criteria

- **relevance:** Is the proposed solution doing the right thing? Does it answer at least one question in the challenge description?
- **coherence:** How well does the solution fit the national healthcare system procedures? Will it be implementable at least from a theoretical point of view?
- **effectiveness:** Is the proposed solution achieving its objectives? Is the prototype feasible for the problem and can we expect short-term benefits while reducing costs and time?
- **impact:** What difference does the proposed solution make?
- **sustainability:** Will the benefits last?

Prizes

The winner of this challenge will

- take home 1,500 €
- get admitted right away as an offline participant to JunctionX Budapest 2023